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## **Scup** by M. Terceiro

Scup or porgy, *Stenotomus chrysops*, occur primarily in the Mid-Atlantic Bight from Cape Cod to Cape Hatteras. Seasonal migrations occur during spring and autumn. In summer, scup are common in inshore waters from Massachusetts to Virginia, while in winter, scup are found in offshore waters between Hudson Canyon and Cape Hatteras at depths ranging from 70 to 180 m (38 to 98 fathoms). Sexual maturity is essentially complete by age 3 at a total length of 21 cm (8.3 in.); spawning occurs during summer months. Scup attain a maximum fork length of about 40 cm (16 in.), and ages of up to 20 years have been reported. Tagging studies have indicated the possibility of two stocks, one in Southern New England waters and the other extending south from New Jersey. However, because the separation of stocks is not well-defined spatially, this separation is not used here.

The principal commercial fishing gear is the otter trawl. Recreational catches are significant. The fishery is now managed under the Summer Flounder, Scup, and Black Sea Bass FMP. Management measures include a moratorium on commercial permits, annually adjustable commercial trawl mesh and minimum size restrictions, commercial quotas, recreational harvest limits, and recreational minimum size and possession limit restrictions, and a fishing mortality rate reduction strategy. Amendment 12 to the FMP established a biomass threshold for scup based on the maximum value of a 3-year moving average of the NEFSC spring bottom trawl survey index of spawning stock biomass (2.77 kg/tow). The scup stock is overfished when the spawning stock biomass index is below this value. Amendment 12 also defined overfishing for scup to occur when the fishing mortality rate exceeds the threshold fishing mortality of  $F_{\max} = 0.26$ .

Total landings have declined from an annual average of 9,500 mt in 1981-1990 to only 2,300 mt in 1998, with markedly reduced landings in both commercial and recreational fisheries due to the current management program. Commercial landings from all countries fluctuated between 18,000 and 27,000 mt annually between 1953 and 1963, but declined to about 4,000 mt during the early 1970s. Commercial landings then steadily increased, reaching a peak of 9,900 mt in 1981 before falling to 2,900 mt in 1996. Currently under Total Allowable Catch (TAC) restrictions, commercial landings were 1,200 mt in 2000. Landings by distant-water fleets peaked at 5,900 mt in 1963, but declined to less than 100 mt per year after 1975.

Most of the increase in commercial landings during the late 1970s was due to increased fixed-gear and otter trawl catches in the Southern New England-New Jersey area. The Virginia winter trawl fishery, which produced landings in excess of 5,000 mt in the early 1960s, has averaged fewer than 200 mt in the past 10 years.

Recreational catches have accounted for 15 to 67% of the annual total during the past ten years. The 1998 recreational catch (400 mt) was the lowest since 1979, but the landings increased to 2,400 mt in 2000.

Current indices of scup spawning stock biomass are near record lows (1998-2000 average = 0.10 kg/tow), at less than 5% of the threshold biomass index of 2.77 kg/tow, and hence the stock is considered to be overfished. Indices of recruitment have trended downward in recent years, except for a moderate 1994 year class, a strong 1997 year class, and a moderate to strong 1999 year class. The stock has a highly truncated age structure, a reflection of prolonged high fishing mortality.

### For further information:

NEFSC [Northeast Fisheries Science Center]. 2000. [Report of the] 31st Northeast Regional Stock Assessment Workshop (31st SAW), Stock Assessment Review Committee (SARC) consensus summary of assessments. Northeast Fish. Sci. Cent. Ref. Doc. 00-15. 400 p.

### Summary Status

Long-term potential catch(MSY)	=	Unknown
Biomass corresponding to MSY	=	Unknown
Minimum biomass threshold	=	2.77 kg/tow (3-year moving average, NEFSC spring survey SSB index)
Stock biomass index 1998-2000	=	0.10 kg/tow (Implies an overfished condition)
$F_{MSY}^1$	=	$F_{max} = 0.26$
Overfishing definition	=	$F_{THRESHOLD} = F_{max} = 0.26$
$F_{2000}$	=	>1.0
Age at 50% maturity	=	2 years, both sexes
Size at 50% maturity	=	15.5 cm (6.1 in.), both sexes
Assessment level	=	Index
Management	=	Summer Flounder, Scup and Black Sea Bass FMP

$$M = 0.20$$

$$F_{0.1} = 0.14$$

$$F_{max} = 0.26$$

<sup>1</sup>  $F_{max}$  is currently used as a proxy

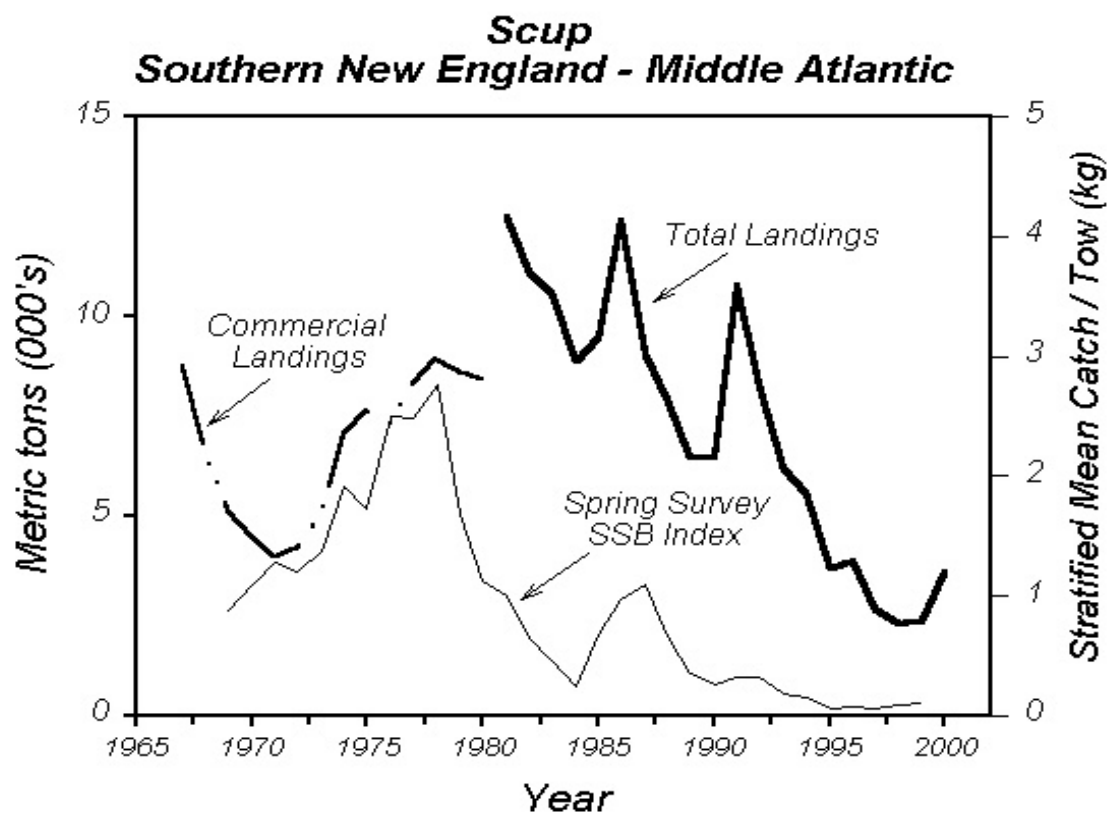


Table 14.1 Recreational and commercial landings (thousand metric tons)

Category	Year										
	1981-90 Average	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
U.S. recreational	2.6	3.7	2.0	1.5	1.2	0.6	1.0	0.5	0.4	0.9	2.4
Commercial											
United States	6.9	7.1	6.3	4.7	4.4	3.1	2.9	2.2	1.9	1.5	1.2
Canada	-	-	-	-	-	-	-	-	-	-	-
Other	<0.1	-	-	-	-	-	-	-	-	-	-
Total nominal catch	9.5	10.8	8.3	6.2	5.6	3.7	3.9	2.7	2.3	2.4	3.6